HECTOR

D5.1

Internal and External IT Communication Infrastructure and Project Website

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Abstract:	This deliverable briefly describes the website and its functionality. Further, it describes the tools provided within the IT infrastructure to facilitate cooperation and coordination.
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Executive Summary

This deliverable provides an overview of the internal and external IT infrastructure of the HECTOR project, which consists of two main parts. It includes the project website which has been designed to provide a user-friendly and informative environment (see Chapter 2) and the collaborative tools to facilitate the cooperation within the project and to assist in the coordination work (see Chapter 3).

A protected workspace, including a set of collaboration services has been set up for the HECTOR project. The project partners log in to the workspace and have then access to all information regarding the project (see Chapter 3.1). A very important tool in this project is the Subversion server (SVN). The SVN allows easy synchronization of documents between the server and a participant's local file storage for sharing documents within the project. It is a central file repository where all project partners can get access to the required documents (see Chapter 3.2).

In all projects, communication is one of the most essential points. For that reason a communication network has been built. This includes mailing list servers and instant messaging (see Chapter 3.3 and 3.4) and telephone conference systems (see Chapter 3.5).

The established environment enables state-of-the art, efficient and user-friendly collaboration and dissemination of information and provides the ideal administrative basis for the project work.

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Chapter 1 Introduction

This deliverable provides an overview of the HECTOR project IT communication infrastructure which consists of a set of tools to facilitate the cooperation among the beneficiaries, the project coordinator and the EC. Aside from the project website a whole set of tools foster the cooperation within the project and enable the dissemination of project results to the general public. Technikon has developed this system for distributed project collaboration in recent years. This trusted collaborative toolbox was awarded an Austrian ICT innovation prize[1] for its security and completeness. The toolbox was incorporated into the architecture which was initiated and configured for HECTOR.

The main components of the trusted knowledge suite (TKS) infrastructure include the following:

- A public dissemination website running on the Joomla! 3.x content management system (CMS) including a restricted area for project participants
- A version control system (Subversion - SVN) for organizing files and documents within the project
- Mailing list server (Mailman) as primary means of communication between participants
- Jabber instant messaging server for exchanging short messages among participants

The subversion, the restricted area of the project website as well as the Jabber instant messaging server use encrypted communication paths and can be configured to work through corporate firewalls that allow encrypted web traffic (SSL[2]). The versioning tool requires a web browser with java-script support. Figure 1 presents the overall architecture of the IT tools in HECTOR.

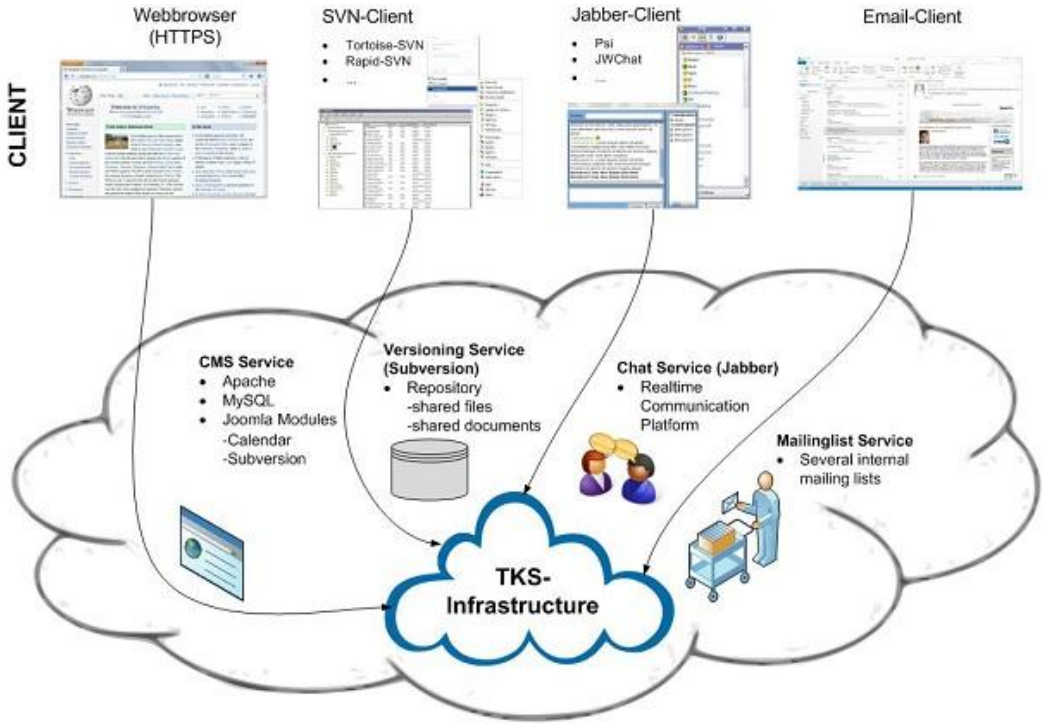

Figure 1: IT infrastructure

[1] http://www.technikon.com/index.php?option=com_content&view=article&id=76&Itemid=79
[2] Secure Sockets Layer – Protocol for a secure connection

Chapter 2 The HECTOR project website

The project website has been designed to provide a user-friendly and informative environment. It is based on the Joomla! Content Management System, which has been adapted to divide the site in to an open area for the public and a closed area for the project partners.

Additional to the information spreading platform, plug-ins, modules and other services are available for the website on request. In detail we provide the following preinstalled functionality for registered users which can be found in the restricted area of the website: documentation and tutorials, calendar, mailing lists, mailing list archives and the integration of the SVN repository within the website.

The HECTOR project website is available on the following link:

http://www.hector-project.eu

The design of the website is based on the colours of the HECTOR Logo.

HECTOR

Figure 2: HECTOR Logo

If a member of the consortium or a third party visits the HECTOR website, he or she will only see the frontend of the website. The purpose is that the visitors cannot change the content of the website as opposed to the administrator.

For users who have an account for the HECTOR website, it is also possible to log in to the restricted area with their username and password (as mentioned before).

Figure 3: The start page of the project website

Figure 3 illustrates the start page of the HECTOR website. The main categories on the front page are: Home, About, News, Publications & Deliverables, Blog, Partners, Contact Us and Restricted Area.

- **Home**

  In the first category, the visitor receives information about the project's mission and also a short overview of the project consortium.

- **About**

  Within this section, information about the project's motivation, its main objectives as well as the technical approach (work packages) gets presented.

- **News**

  In this area visitors can find an overview of HECTOR news like conferences, workshops and meetings, press releases, leaflet etc.

- **Publications & Deliverables**

  Here, visitors can see and download project publications, papers and public deliverables

- **Blog**

  Relevant information can be posted by the coordinator via the BLOG. In **Fehler! Verweisquelle konnte nicht gefunden werden.** one of the first official HECTOR project blog posts, a picture of the project Kick-off meeting in Grenoble is displayed.

- **Partners**

  On this page everyone can have a look on the overview of the team members. Furthermore, each partner homepage is linked on the logo and name.

- **Contact Us**

  Via the "Contact Us" page it is possible to send an email directly to the coordinator of the HECTOR project. It is intended for general feedback or questions to the project or website.

- **Restricted Area**

  Every registered user has access to the restricted area which contains several useful and practical features such as a calendar or the SVN repository.

HECTOR Project Kick-off

13 March 2015 / by Corinna Kudler

The H2020 HECTOR project has successfully been kicked-off.

Read more ...

Figure 4: HECTOR Blog

The HECTOR website keeps at the bottom of each page links redirecting to the disclaimer, the legal notice, the privacy policy and the feedback sites. The website can be best viewed with a standard desktop web browser as well as on a smart phone and will be kept alive throughout the project period and a few years afterwards.

The website is updated by Technikon on a regular basis, depending on the release of major updates by developers of the Joomla! CMS. In each periodic report of HECTOR, statistics will be presented, in order to evaluate the success of the website. For collecting these, Technikon makes use of two different tools, AWStats[3] and Google-Analytics[4], both having different approaches on how they generate their statistics. The metrics chosen to be presented will be selected depending on need or interest respectively. For example, these can be:

- The number of unique visitors
- The number of total visits
- Top 10 downloads
- The geographical distribution of the visitors' locations
- The ratio between new and returning visitors

[3] http://www.awstats.org

[4] http://www.google.com/analytics/

Chapter 3 HECTOR collaborative tools

A set of collaborative tools are provided by the coordinator to facilitate the cooperation within the project and to assist in the coordination work. These tools are:

- A protected online workspace (CMS → Joomla! 3.x),
- A private instant messaging server, with the possibility of encrypted communication,
- A versioning system for keeping track of documents, and
- A mailing list system for information exchange.

All users obtained a registration link via email at the beginning of the project. This link allowed them to set their password, which works for all tools. Further members can at any time retrieve a new link to reset their password (e.g. periodically update of password due to security issues).

3.1 Protected workspace

The collaborative workspace is using the same platform as the website. The users log in to the restricted area of the website and are then presented with the additional protected information accessible through a separated user menu. Once logged in, the users have read and write access to several useful and practical features such as a calendar or the SVN repository. The menu item "Documentation & Tutorials" provides helpful links and documentation concerning the internal IT infrastructure and SVN. Figure 5 illustrates the content of the restricted area.

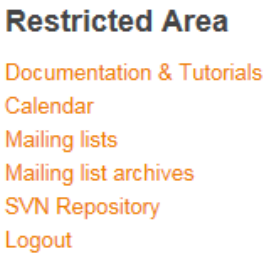

Figure 5: Content of restricted area

3.1.1 Documentation & Tutorials

In this section every registered user can download or view some documentation regarding the project, for example:

- General IT-Infrastructure Tutorial
- Usage of Subversion client– Rules of Conduct HowTo
- Usage central file repository HowTo
- Pidgin chat client usage HowTo
- Project Handbook

3.1.2 Calendar

The calendar shows upcoming events to every user. The calendar is configured to show a monthly overview by default, but the user can view the calendar by year, month, week or by day as well as search for an event. The calendar can be exported and downloaded as iCalendar-file. There is also

the possibility to integrate the calendar into the partners personal Microsoft Outlook or Mozilla Sunbird calendar to be kept up-to-date. Further on, there is an overview with upcoming events in the right navigation bar which sows the next 5 upcoming events (maximum 150 days up front).

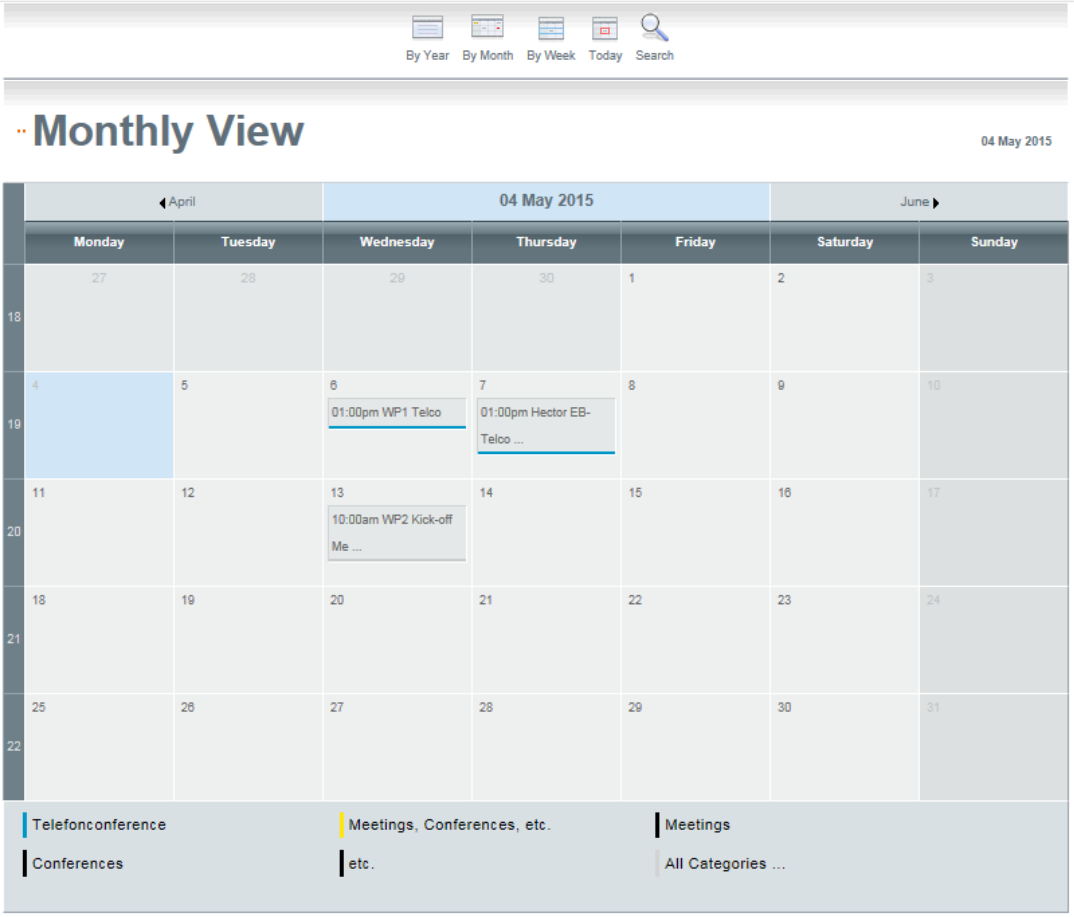

Figure 6: Calendar

3.1.3 Mailing lists and mailing list archives

This menu allows users to have a look at the set of available mailing lists, as well as on the mailing list archives. This is helpful to quickly check if emails have been sent out to one of the dedicated mailing lists, when a user has no immediate access to an email client. Further the archives help to follow up email conversations and implicitly act as backup service.

3.1.4 SVN Repository

In this menu, the subversion repository https://hector.technikon.com/ (see Chapter 3.2) will be shown within the website. As the repository is in this case accessed via browser, only read-access is given.

3.2 SVN Server

The Subversion server allows for easy synchronization of documents between the server and a participant's local file storage. The system includes tools for retrieving older versions of a particular file, resolving conflicts between different versions of the same file and locking files for local editing. Two main tools are provided by the server. On the one hand, there is the client access which

provides the user reading and editing rights. On the other hand, there is the browser access on which the user only has read-access to the data.

Some major advantages of the subversion are for example:

- Offline availability of the data via SVN clients (stored on your local hard disc)
- Read-only access via HTTPS[5] (Web Browser)
- Synchronizing the data between Client/Server
- All former versions of the file are available and reproducible
- E-mail notification on activity (e.g. “commit” action)

3.2.1 TORTOISE Client access

This is a very useful software tool for accessing and working with SVN repositories. Although there are several other clients available, good experiences with this software have been made in the course of several years of usage.

To get a feeling of how to handle the connection to the SVN server the following chapter presents a short introduction on how to install and use the software tool:

a.) Create and download the repository:

- Download and install the subversion client.

  The rest of this instruction will assume that you have installed the TortoiseSVN client, which can be downloaded from http://tortoisesvn.tigris.org. For the installation of the client please follow the instruction steps written on the homepage.

- Create a folder on a local disk. For example C:\SVN\HECTOR
- Right click on the folder and choose "SVN Checkout"

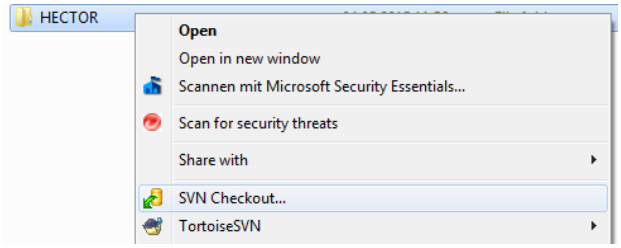

Figure 7: SVN Checkout (a)

- Use https://hector.technikon.com/ as the URL of the repository. Everything else can be left as it is. Make sure that “HEAD revision” is checked.

[5] Hypertext Transfer Protocol Secure – used for a secure connection between Browser and Web server

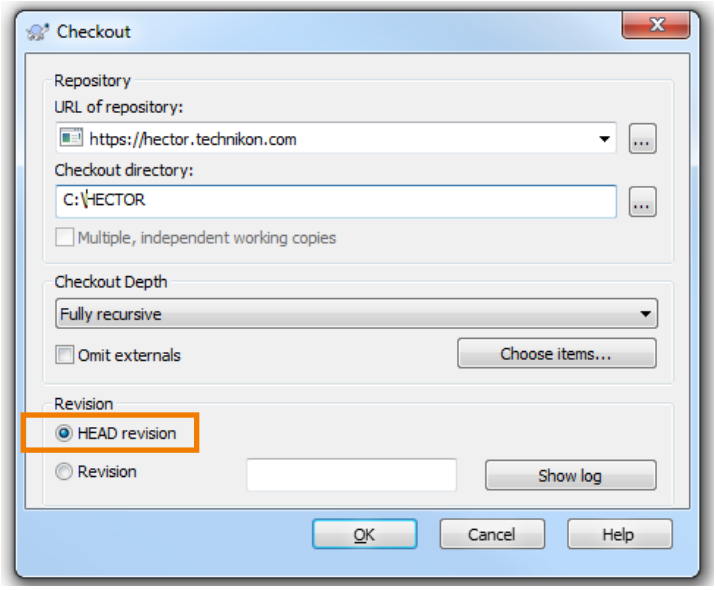

Figure 8: SVN Checkout (b)

- Authorization for HECTOR SVN is required: Insert your username and password.
- Download the content of the repository to the newly created folder. This might take a while, depending on the bandwidth and the size of the repository.

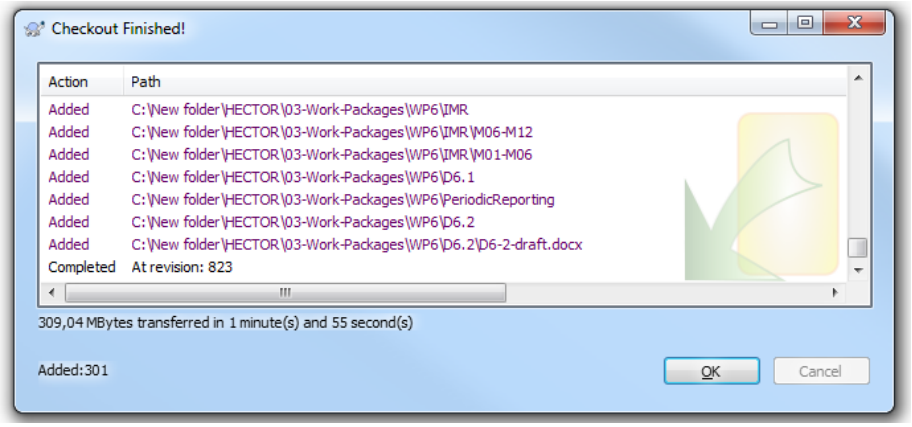

Figure 9: Download content from repository

b.) Keeping up to date:

- Right click on the folder and choose “SVN Update”.

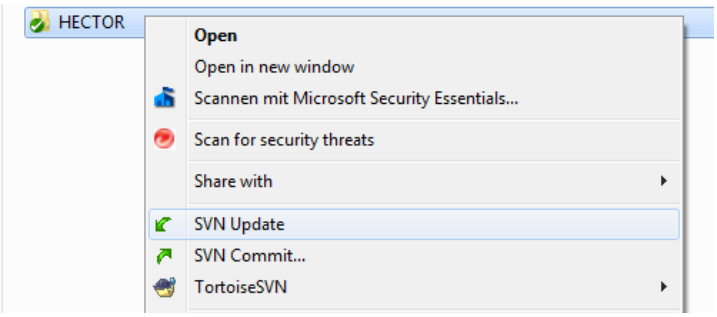

Figure 10: SVN Update

c.) Committing new documents (uploading)

- Save the document in an appropriate location within the folder created in the chapter above.

- Right click on the new file and choose TortoiseSVN → Add. (A small + will be added to the icon of the file)
- Right click on the file again and choose "SVN Commit..."
- Enter a comment about the document and the updates you made.

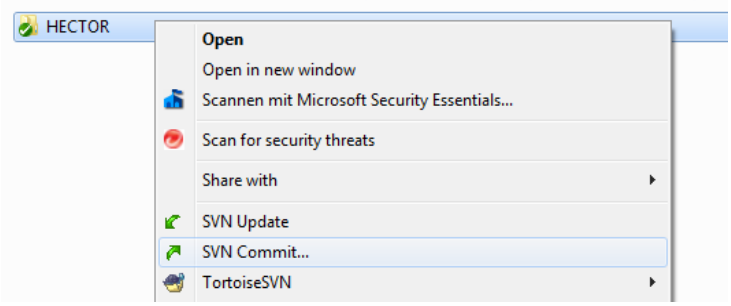

Figure 11: SVN Commit

The described procedure can also be used on entire folders and will then work recursively.

ATTENTION: Please refrain from committing the entire repository! Subversion is robust and changes can always be rolled back but smaller commits significantly reduce the risk of committing old versions etc.

d.) Locking

You are highly encouraged to "lock" SVN documents while working on them. This avoids conflicts by concurrent editing. The downside is that sometimes "stale" locks are forgotten. If a lock is older than 24hrs without any new commit in between, then we consider it outdated and you can steal it. If in doubt or urgent access is needed, also feel free to contact the owner of the lock directly.

e.) Clients

- "Tortoise SVN" http://tortoisesvn.tigris.org/ -- Windows client that integrates with explorer
- "SmartSVN" http://www.smartsvn.com/ -- Linux/MacOS/Windows client

3.2.2 Browser access

It's also possible to access the data through your Web Browser.

NOTE: With the Web Browser you only have read-access to the data.

Figure 12: Browser access

3.3 Mailing list server

A number of mailing lists are available to the project members for easy communication with a set of participants. For subscriptions and other management tasks it is necessary to write an email to coordination@hector-project.eu. Access is controlled by the coordinator to ensure the integrity of the lists.

Technikon has set up a mailing server with a wide range of different mailing lists, where all people who are responsible for the various sections are subscribed.

The different HECTOR mailing lists can be seen in the following table.

Mailing List Name	Members
hector@lists.technikon.com	All personnel actively involved in the project
hector-financial@lists.technikon.com	Personnel responsible for financial questions and tasks, e.g. financial reporting
hector-technical@lists.technikon.com	For all technical correspondence in WP1-WP6 and EB member discussions
hector-ga@lists.technikon.com	For General Assembly members and deputies
hector-publication@lists.technikon.com	Partners will be informed about Publication & Notices at least 45 days before publication according to Article 29.1 GA
hector-svnlog@lists.technikon.com	Email notification on SVN commits

Table 1: Mailing lists

3.4 Jabber instant messaging server

An instant messaging server, based on the open Jabber protocol (also known as XMPP[6]) is maintained by the coordinator. The server provides a quick way to exchange a few words. It also supports multi-user conferences and has a built in User Directory. Figure 13 shows an example view of the recommended Pidgin chat client.

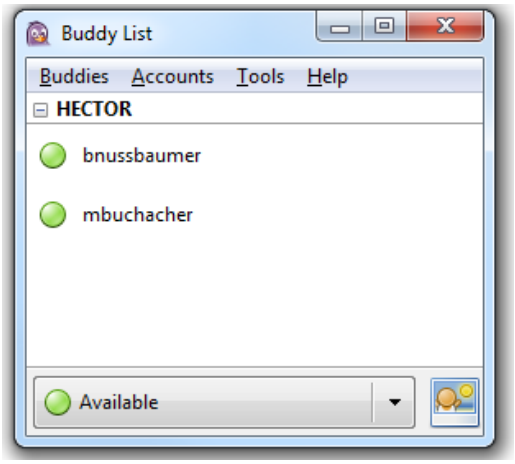

Figure 13: The Pidgin chat client

[6] Extensible Messaging and Presence Protocol – used for instant messaging services

Pidgin is a modern and easy-to-use real-time communication tool, which allows chatting with online partners.

If you would like to use this communication tool with a client, it requires the following steps:

- Download the chat client from https://www.pidgin.im/
- Install the programme by following the wizard's instructions
- Go to your programme folder and start Pidgin
- Please click 'Add…'
- Fill the settings with following data and click 'Add'

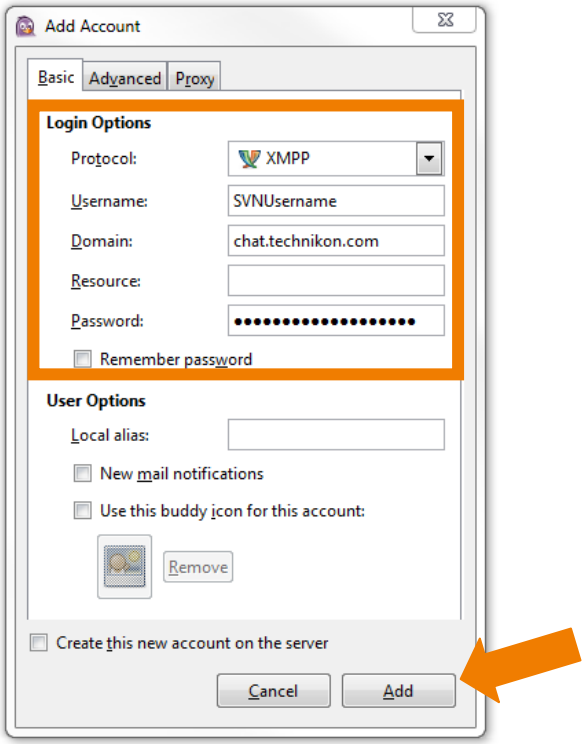

Figure 14: Settings for the Pidgin chat

The username and password are the same as for the other HECTOR IT services.

3.5 Telephone conference system

In addition to the planned physical meetings, we will perform regular telephone conferences within the HECTOR project. Therefore the following telephone conference system is available for all partners:

GoToMeeting:

This web conferencing tool allows you to host an online meeting with up to 25 people. Users can dial in either via a Local client (VoIP[7]) or use the dedicated country code, which is provided by the organizer. GoToMeeting provides the possibility to share any application on your computer in real time. The tool is provided by the coordinator TEC.

[7] Voice over IP – voice communication technique transmitted over internet protocol (IP) networks

Chapter 4 Summary and Conclusion

This document provides an initial documentation of the HECTOR IT-related infrastructure and will be included into the project handbook for subsequent maintenance.

The website was reviewed by several management and research employees of TEC and very useful feedback has been received. Special attention was paid to the privacy. Only logged in users have the possibility to have a look at the documents, tutorials and the calendar.

Through publishing all relevant public information of the project on the official HECTOR website, the website will be kept lively and external visitors will immediately see the current news and activities. Further this allows more interaction and communication within and outside the HECTOR Consortium.

The HECTOR infrastructure provides an essential benefit for all project partners. One of the most important points is the Subversion Repository (SVN). All project partners are able to access all project relevant information and documents. Further the communication environment, including, Jabber Server, different mailing lists, conference call systems, create transparent efficient working conditions.

Chapter 5 List of Abbreviations

Abbreviation	Explanation
CMS	**C**ontent **M**anagement **S**ystem
HTTPS	**H**ypertext **T**ransfer **P**rotocol **S**ecure
SSL	**S**ecure **S**ockets **L**ayer
SVN	**S**ub**v**ersio**n** server
TKS	**T**rusted **K**nowledge **S**uite
URL	**U**niform **R**esource **L**ocator
VoIP	**V**oice **o**ver **I**nternet **P**rotocol
XMPP	E**x**tensible **M**essaging and **P**resence **P**rotocol